#### **EUROPEAN COMMISSION**



ICT Challenge 6: Mobility, environmental sustainability and energy efficiency
INFORMATION SOCIETY TECHNOLOGIES
Unit G5 - ICT for the Environment



Project Acronym:

## SmartHouse/SmartGrid

Project Full Title:

Smart Houses Interacting with Smart Grids to achieve next-generation energy efficiency and sustainability

Proposal/Contract No: EU FP7-ICT-2007-2 STREP 224628

# Deliverable D5.1 Dissemination and Use Plan

Status: Final

Dissemination Level: PU

Date: 28-Oct-2009

Organization Name of the Lead Contractor for this Deliverable: SAP



Status Description

Scheduled completion date <sup>1</sup> :	31.08.2009	Actual completion date <sup>2</sup> :	15.10.2	2009	
Short document description:	dissemination activities, i.e. publication industrial events. It can be used by	he SmartHouse/SmartGrid dissemination plan gives an overview of planned issemination activities, i.e. publications and project presentation at academic and idustrial events. It can be used by partners as a useful reference to identify planned ctivities in order to see where they can participate or contribute to disseminating martHouse/SmartGrid results.			
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Partner  → Peer reviews  Contributions	SAP ISET MVV ECN ICCS-NTUA PPC	x Deliverable	Report/deliverable classification:  Deliverable Activity Report		
Peer review approv	val : Approved Rejected (improve as spe	ecified hereunder)	Date:	[dd.mm.yyyy]	
Suggested improvements:	[suggested improvements]				

## Version History

Version:	Date:	Comments, Changes, Status:	Person(s)3:
V0.1	24.04.2009	Initial version	Anke Weidlich

<sup>&</sup>lt;sup>1</sup> As defined in the DoW

<sup>&</sup>lt;sup>2</sup> Scheduled date for approval

<sup>&</sup>lt;sup>3</sup> A list of company short tags can be found in DoW



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#### 1. Overview and Objectives

This document describes the strategy and the instruments to be used for disseminating the results obtained by the SmartHouse/SmartGrid research project. The document will define the different target groups addressed (Section 2), the different dissemination instruments to be used to address the selected target groups (Section  $\circ$ ) and the implementation strategy to be adopted for each instrument (Section 4).

The SH/SG project focuses on aggregate houses as intelligent networked collaborations. Through a number of field tests we seek to prove, that ICT technology is applicable and working under real life conditions and that it is affordable. Furthermore the field tests should prove the significant potential of ICT technology for mass production in Europe as well as the opportunity to achieve energy efficiency gains of over 20 % through the application of ICT technology.

According to the development of the market and the progress in the SmartHouse/SmartGrid project, all dissemination activities should aim to

- let the market discover SmartHouse/SmartGrid concepts and results, as well as their business benefits,
- achieve market acceptance for the technologies behind the SmartHouse/SmartGrid project,
- · stimulate replication effects in the adoption of SmartHouse/SmartGrid technology, and
- mobilize interest within the research communities, by policy makers, home automation manufacturers and utilities, as well as end-consumers, and link fractionized ideas to an overall view of the functioning of SmartHouses as part of a SmartGrid

This range of goals is the common basis for all dissemination activities. The goals should be targeted according to the knowledge and main interests of the respective target groups (see Section 2). Due to the large variety of potential applications and the multitude of possible stakeholders and sectors that play a role for SmartHouse/SmartGrid concepts, segmentation into different levels of presenting results and content is necessary to ensure that the right contents can be presented to the right audience (i.e. a graphical animation on the project website is targeted towards a broad audience (see 3.1 and Figure 2), whereas there are also publications for the scientific communities and deliverables for specialized practitioners.

Among the set of industrial sectors considered, only those that include a considerable number of applications will be selected, so as to optimise the dissemination impact. In fact, the project budget does not cover all the possible sectors and related target groups. In order to reach the pre-defined target groups, several dissemination instruments and channels should be used (see Section 3).



#### 2. Target Groups

The three main target groups of the project's dissemination activities are senior-level decision makers in companies and organisations, IT professionals and managers in the energy sector, and researchers / academia in the energy sector. These groups will be approached directly e.g. via the partners, or indirectly via dissemination activities in international and high quality events, media, conferences etc.

The first group of people are those within the organisational hierarchy that have a major say in the all strategic decisions. Such people need not have an IT background and do not necessarily attend IT fairs or industrial events. They are thus the most influential group but the hardest to target directly. They can be reached through personal contacts, articles in the general press and in the press for the particular industrial sector. Indirectly, their opinions will also be influenced by the other groups targeted for dissemination.

The IT professionals will also carry significant weight in deciding a utility's or other organisation's technology strategy. The project can reach them through commercially oriented trade fairs, and the IT press.

In addition to the three prime target groups, several others have been identified as being important, because of the way they indirectly affect the take-up of the SmartHouse/SmartGrid results. They include the following:

- Standardisation bodies focusing on device integration and transactions such as
  - OASIS WS-DD (dealing with service enabled devices)
  - OASIS Energy Interoperation Group (dealing with transaction standards on SmartGrid)
- The general public should also be informed via article in the general press so as to raise awareness for increasing energy efficiency through SmartHouse/SmartGrid concepts and to raise technology acceptance.

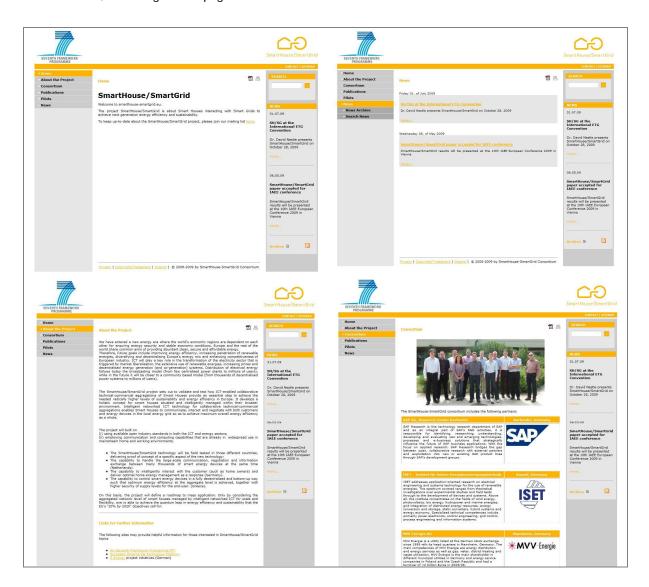


#### 3. Dissemination Instruments

To communicate the elaborated messages and subjects to the target groups, the SmartHouse/SmartGrid project will use different dissemination instruments, such as events, the Internet, other media instruments, and liaisoning activities.

#### 3.1. Website

The SmartHouse/SmartGrid website is accessible under http://www.smarthouse-smartgrid.eu. It contains a News section, to be found at the right hand side of each sub-page, in which up-to-date information about publications, events and current developments within the project are posted. The other pages of the website deliver descriptions of the overall project goals, the planned field trials, the consortium or the publications that have already been created in the context of the project (downloadable). Figure 1 shows some screenshots of the website, including its sub-pages.





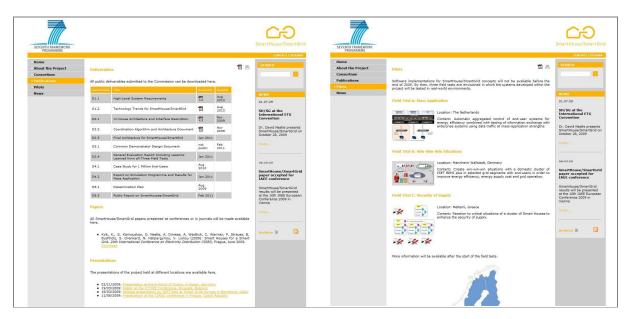


Figure 1: Screenshots of the SmartHouse/SmartGrid website

The project has the aim to participate in the Best ICT4EE Project Award, which mainly takes the project websites as a criterion for judging the projects. Therefore, some enhancements to the website are planned. One of it is the creation of an animation that illustrates the goals of SmartHouse/SmartGrid in a graphically appealing manner. A concept of the animation already exists and now has to be realized by a graphical designer or web designer. The purpose and goals of the animation are to

- make people understand the objective of SH/SG in an enjoyable manner
- visualize the main components that are dealt with in SH/SG
- enhance the attractiveness of the project website

The technical realization should allow the animation to be displayed with common web browsers, and will probably rely on Adobe Flash or comparable technologies. An introductory first screen should first describe of all relevant system elements, i.e. the SmartGrid, a SmartHouse with distributed generation (µCHP, photovoltaic panels), and controllable appliances such as a fridge, deep-freezer, washing machine, dishwasher, dimmable light or also an electric car.

On a following screen, the user can follow how changes are made in order to increase the overall system efficiency. The SH/SG concepts optimize the operation of the washing machine, fridge, deep-freezer and dishwasher, switch off or dim light, control the operation of  $\mu$ CHP plant and gives signals for the smart charging of an electric car, in order to increase the overall system efficiency. The user can then follow a critical system situation, in which the system dims lights and shuts off several appliances (visualizing field test C).

The user gets information about the comparison of costs with and without optimum operation and the comparison of CO<sub>2</sub> emissions with and without optimized operation in order to see the SH/SG effects. Basically, the user should be able to choose one of the three animations that explain the most important SH/SG ideas covered in the field tests. In a status quo scenario, the current situation is described. A second scenario would be that of an optimal device operation with time varying electricity prices, which corresponds to the PowerMatcher and BEMI concepts tested in field trials A and B. The third scenario corresponds to the islanding case in a critical grid situation and thus visualizes field trial C.

The user can hover over the system elements and get additional information, e.g. why prices vary (load situation, supply from renewable sources), why it's better to have shiftable loads run at off-peak times or at



times of high renewable availability, or how fridges and a deep-freezers can adapt operation to current price situations. Figure 2 gives an overview of the components to be visualized by the animation.

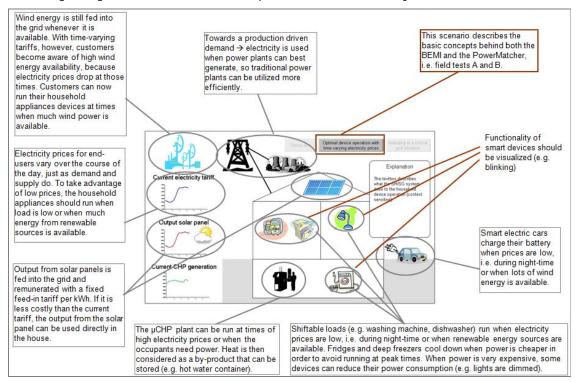


Figure 2: Concepts for the SmartHouse/SmartGrid animation

#### 3.2. Newsletter

Beginning with month 13 of the SmartHouse/SmartGrid project, the team started to send out a newsletter about the latest developments from the project work. This newsletter will be sent out in the future in an irregular schedule, i.e. at each time that relevant new developments have taken place.

At the project website, there is a "register" function where any interested party can let herself be added to the mailing list in order to receive the newsletter. Up to now (as of October 15, 2009) 49 persons registered to this newsletter, starting from January 2009. Subscriptions were substantially higher in the second half of 2009 than in the first and are expected to rise in the future, as more and more outputs are generated within the project. The following list gives some indication about the subscriptions to the newsletter:

- Jan March 2009: ten subscriptions
- April July 2009: 14 subscriptions
- August 2009: ten subscriptions
- September 2009: eight subscriptions
- October 2009: seven subscriptions until Oct 15

A complete list of all subscribers and the content of the first SmartHouse/SmartGrid newsletter is given in the appendix.

#### 3.3. Events

The project results will be promoted at a number of industrial events all over Europe. In particular, the set of events we will consider for promotion is classified into industrial events and academic events.



#### 3.3.1. Industrial Events

Industrial events cover industrial workshops and general industrial trade fairs. Both formats are envisaged as dissemination channels for SmartHouse/SmartGrid results.

Industrial workshops are usually organized for a selected limited audience pertaining to a limited number of industrial sectors, on a local basis or in a road show format. They are usually highly effective, because of their short duration and focused contents. The audience is usually invited on a one to one basis thus guaranteeing a high level of participation in terms of quality and interest.

As industrial workshops are usually planned in shorter terms, it cannot yet be planned at which workshops SmartHouse/SmartGrid partners will participate and spread the project ideas. The workshops attended or planned so far are listed in the following:

- Events of the SmartGrids European Technology Platform
  - General Assembly on 8.-9.10.2009 in Brussels, where the "Strategic Deployment Document" has been discussed
- Events of the working group "ICT for the energy markets of the future" by the German Federation of Industries

General industrial trade fairs introduce and demonstrate new technologies and solutions to a broad audience. Exhibitors and potential clients get to know each other personally and solutions and technologies can be demonstrated with respect to the special questions of the visitor. Thus, trade fairs are good platforms for SmartHouse/SmartGrid partners to exchange with experts from the relevant industries, to present SmartHouse/SmartGrid concepts and also to demonstrate and illustrate results to potential end users. The project team has already presented or aims at being present at the following trade fairs:

- E-World of Energy, 11.02.2009 in Essen, Germany: a SmartHouse/SmartGrid presentation was held at the "SAP and Partners" booth; the presentation slides have afterwards been made available on the project website
- 7th International SAP Utilities Conference, which takes place in October 2009 in Munich, Germany; focus of the event: "Energy Efficiency Makes Cents – Embracing Sustainability for Your Customers' Benefit"
- SAP SAPPHIRE event(s) 2010/2011 will be considered for presentation of project's results

Aside from these public events, there have already been some "closed" / "by invitation only" events in which the SmartHouse/SmartGrid visions have been presented to important stakeholders. Up to now, two delegations have been invited by SAP:

- Sept 2008: the SmartHouse/SmartGrid project has been presented by Stamatis Karnouskos to approx 25 members of the "Photovoltaic Community of SAP" in Berlin, Germany.
- Sept 2008: the SmartHouse/SmartGrid project has been presented to a member of the SAP Board of Directors.
- Sept 2008: and Dec 2008, the SmartHouse/SmartGrid has been presented by Stamtais Karnouskos to a multinational-metering company delegation (note: name cannot be revealed) at SAP.
- 09 Oct 2008: the SmartHouse/SmartGrid project has been presented to several industries of Canada, in the context of the talk "Towards future information-rich energy networks" delivered by Stamatis Karnouskos. The SAP Utilities Thought Leadership Seminar event was titled "Is your Utility smart enough?" and took place in Calgary, Canada.
- Mar 2009: A presentation was done to all colleagues of SAP Business Unit of Utilities.
- Mar 2009: the SmartHouse/SmartGrid project has been presented to an R&D group of EDF.



- 02 Apr 2009: The SmartHouse/SmartGrid concepts were presented to the FIGAWA (<u>www.figawa.de</u>)
   Forum, in the context of the invited talk "IKT für Energiemärkte der Zukunft Die Energiewirtschaft auf dem Weg ins Internetzeitalter", delivered by Stamatis Karnouskos.
- May 2009: a delegation of IT professionals from State Grid Corporation of China have visited SAP and got information about SmartHouse/SmartGrid.
- 09 June 2008: the SmartHouse/SmartGrid project has been presented to several industries of Canada, in
  the context of the talk "The future of Energy Markets" delivered by Stamatis Karnouskos. The SAP
  Utilities Thought Leadership Seminar event was titled "SAP Energy Day" and took place in Toronto,
  Canada.
- Aug 2009: a South-Korean delegation from the "Climate Technology Group" of LG Electronics visited SAP's CEC in Karlsruhe to get informed especially about the consumer device side of SmartHouse/SmartGrid.
- 27-28 Oct 2009: SmartHouse/SmartGrid presentation will be made by ISET in the international congress "Energietechnik Schlüsseltechnologie aus Europa", in Düsseldorf, Germany.

02 Nov 2009: SmartHouse/SmartGrid will be part of the presentation "Cooperative Objects empowering sensing, monitoring and management for enterprise applications" by Stamatis Karnouskos in the Industry Forum 2009, organized by IEEE Industrial Electronics Society in Porto, Portugal.

Besides, SAP mentioned the project activities and the planned field test at numerous occasions at which partners or customers informed themselves about SAP's ongoing activities in the future energy domain; among these was e.g. a large-audience presentation at the 7th International SAP Utilities Conference, among many others.

It is planned to pursue these activities also in the future in order to spread SH/SG visions to relevant stakeholders.

#### 3.3.2. Academic Events

As stated in the DoW document, SmartHouse/SmartGrid partners will be actively participating in ICT and energy related conferences. Table 1 gives an overview of the conferences for which SmartHouse/SmartGrid participation had been planned in the DoW, and specifies whether participation has already taken place or – if not – for which date it is scheduled.

Category	Proposed conference	Status / plan
ICT oriented	AAMAS International Conference on Autonomous Agents and Multiagent Systems	Paper submission planned
	AAAI Conference on Artificial Intelligence	Paper submission planned
	IAAI Innovative Applications of Artificial Intelligence Conference	Paper submission planned
Energy related	IEEE Power Engineering Society General Meeting	Paper will be prepared for 2010 conference
	IEEE Power Engineering Society Transmission and Distribution Conference	Paper submission under discussion
	IRED Conference on Integration of Renewable Electricity Sources	Paper submission under discussion
	CIGRE International Council on Large Electric	Paper submission under



	Systems	discussion
	CIRED International Conference on Electricity Distribution	Paper presented at 2009 conference in Session 4 "Distributed Energy Resources and Efficient Utilisation of Electricity"; participation at 2011 conference planned for presenting the final SH/SG results
	VDE ETG-Kongress in Germany (national conferences)	Paper submitted for 2009 conference
	Conferences / workshops on metering and distributed energy management	See further events below
Combined ICT & energy	CRIS Conference on Critical Infrastructures	Paper submission under discussion
	HICSS System Sciences Conference, Track on Power Systems Restructuring	Paper submission under discussion
	ISAP International Conference on Intelligent System Applications to Power Systems	Participation planned in 2009 or 2010
	Metering & Billing Europe	Paper submission under discussion
	Conferences related to home automation	See further events below
	E-Energy Conference, Athens (http://energyware.org)	Organized by PPC; all SH/SG partners are invited to submit papers to this conference.
	Grid-Interop 2009, November 17-19 in Denver, USA	Joint paper "Web Services for Integration of Smart Houses in the Smart Grid" by ECN and SAP was accepted for presentation at this conference

Table 1: Current status of planned academic conference participations as stated in the DoW

Also as announced in the DoW, ECN is planning to organise the 1st European Workshop on Agents in Power Systems (EWAPS), gathering researchers from all over Europe working in Multi-Agent Systems and agent technology applied to electrical power systems. The main goals are to discuss the current state of the art in this line of research, to reinforce Europe's leading role in this line of research, and to define the future research agenda. This workshop is scheduled for 2010.

During the course of the project, further conference and workshop participations have been conducted or planned, which are listed in the following:

- 25 Mar 2009: SmartHouse/SmartGrid was presented to FP7 WASP project workshop in Darmstadt, Germany, in the context of "Device to Business Integration" talk by Stamatis Karnouskos.
- 19-20 Mar 2009: In the ICT4EE event on March in Brussels, presented the concepts of the SmartHouse/SmartGrid project with a poster, handouts and with a live demo.



- 14 May 2009: Participation in the workshop "Smart Home Vision 2020" at Forschungszentrum Informatik, in Karlsruhe, Germany.
- 22 June 2009: The SmartHouse/SmartGrid was presented in the context of the talk "Integration of Real-World Information in Enterprise Services" delivered by Stamatis Karnouskos, to participants of the Ecole Thématique, Summer School organized by INRIA in Metz, France.
- 24-26 Jun 2009: SmartHouse/SmartGrid was presented as part of the keynote "Towards the Perfect Plant via real-world cross-layer collaboration", delivered by Stamatis Karnouskos on IEEE INDIN 2009 in Cardiff, UK.
- 24-26 Jun 2009: Presentation of a SmartHouse/SmartGrid paper titled "Simulation of Web Service Enabled Smart Meters in an Event-based Infrastructure" by Stamatis Karnouskos and Anastasia Izmaylova, in IEEE INDIN 2009 in Cardiff, UK.
- 24-26 Jun 2009: Presentation of a SmartHouse/SmartGrid paper titled "Towards the Energy Efficient Future Factory" by Stamatis Karnouskos, Armando Walter Colombo, Jose L. Martinez Lastra and Corina Popescu, in IEEE INDIN 2009, Cardiff, UK.
- 09 Jul 2009: The existing results and ongoing work of SmartHouse/SmartGrid was presented to the FP7 ICT4SMARTDG Thematic Network by Stamatis Karnouskos. SAP participates in this project and will make sure that results are cross-fertilized.
- 26 Jul-01 Aug: The SmartHouse/SmartGrid project was presented as part of the lecture titled "Future Enterprises based on Real-World Services" by Stamatis Karnouskos, to the participants of the "SENIOT: From Sensor Networks to Networked Intelligent Objects", and International Summer School organized by FP7 CONET.
- 07-10 Sep 2009: Abstract accepted for the 10th IAEE European Conference Energy, Policies and Technologies for Sustainable Economies, 7 - 10 September 2009; the paper will be presented in September 2009 by Anke Weidlich and Stamatis Karnouskos
- 16 Sep 2009: The SmartHouse/SmartGrid project will be presented in the European Technology Platform SmartGrids, in the context of the WG3 on Demand and Metering.
- 19-20 Oct 2009: Jan Ringelstein from Fraunhofer IWES presents the SmartHouse/SmartGrid project and its outcomes at the European Energy Efficiency Strategies event in Brussels.
- 16-17 Nov 2009: Beywatch event "ICT for sustainable homes", 16.-17.11.2009 in Nice, France; project partners from ISET and from SAP will attend the event (and give a panel talk) of this related EC cofunded research project and thereby stimulate an exchange of ideas with the Beywatch consortium
- 25 Sep 2009: SmartHouse/SmartGrid presented ongoing work in the European Commission organized event "Implementation of demonstrations of smart electricity distribution network solutions", Brussels, 25 September 2009
- 2010: 4th International Decentralized Energy, late 2010; MVV plans to attend this conference and present project results there
- 2010: PowerTech (takes place twice per year); ECN will present SmartHouse/SmartGrid at this event
- 2010: International trade fair in Tessaloniki, Greece; PPC has a booth at this event every year and expressed its willingness to present the SmartHouse/SmartGrid visions at their booth in one of the next fairs

It has to be pointed out that many of the events are annual, therefore we target to be present there on 2011 and beyond also. Furthermore opportunities are identified also dynamically e.g. via spread Call-For-Papers and ongoing interactions with other projects and domain actors.



#### 3.4. Cooperation With Other Projects and Initiatives

The SmartHouse/SmartGrid project has already established contacts and cooperates with several other projects at national and international level. This is done by giving mutual project presentations, participating in events and following up the work closely. Furthermore partners of SmartHouse/SmartGrid participate actively also in other initiatives and therefore make sure that the best result are cross-transferred. Examples of such projects include: BeyWatch (FP7), MEREGIO (DE), "ModelIstadt Mannheim" (DE), RegModHarz (DE), ICT4SmartDG (FP7), SEESGEN-ICT (FP7), CONET (FP7) etc.

In September 2009, the SmartHouse/SmartGrid consortium became part of the International REEB Community (IRC). The REEB Project is an FP7 Coordination Action led by CSTB and developed in collaboration with VTT, CEA, LABEIN Tecnalia, ACCIONA, ARUP, UC Cork and TU Dresden, among the most relevant European organizations in relation with ICT and Energy Efficiency in Buildings. The aim of the REEB project is to facilitate the co-creation of a Strategic Research Agenda (SRA) and a supporting Implementation Activity Plan for sustainable and energy-efficient smart building constructions through the establishment of a dialogue between interactive and complementary communities of practice from energy, environment, and building construction domains. The SH/SG team will become engaged in these activities.

#### 3.5. Journals and other Publication Channels

Publications in scientific journals usually require some detailed research results in order to have a chance of being published. Usually, these can be expected from the second half of the project duration onwards. Especially during and after the field tests, quantitative results are available that are worth publishing in journal papers. The following journals have been proposed for publications in the DoW, and are still planned as a channel for presenting SH/SG results:

- International Journal of Distributed Energy Resources
- IEEE Intelligent Systems
- IEEE Transactions on Power Systems
- IET Journal on Renewable Power Generation

In addition, some more magazines oriented more towards practitioners have been identified as further publication channels for SmartHouse/SmartGrid:

- MVV Magazine
- PPC Magazine
- Technical magazine for electrical engineers in Greece
- VKU-Journal
- Wirtschaftsinformatik & Management

One article has already been submitted to the last journal mentioned, Wirtschaftsinformatik & Management. It is written in German and will appear soon. Besides, no journal publications describing results from the SmartHouse/SmartGrid project have been prepared, yet.

#### 3.6. Illustrative Dissemination Material

In the following, the SmartHouse/SmartGrid poster and handout is presented. Both are used to visualize the project's research topics at various events. They have already been deployed at several occasions and have received positive feedback.



#### 3.6.1. Posters

SAP has designed a SmartHouse/SmartGrid poster which has first been utilized at the ICT4EE event 2009 in Brussels. The poster is available to all project partners and can be used at all possible events. Figure 3 shows the SH/SG poster. It is also attached in A4 size to this deliverable (see Annex).



Figure 3: SmartHouse/SmartGrid poster

#### 3.6.2. Flyers

A handout describing the SmartHouse/SmartGrid field trials has been created for the ICT4EE event which took place in March 2009 in Brussels. These handouts have been printed and distributed to the interested audience. They will also be used at future events in order to illustrate the topics that are investigated in the three field trials. Figure 4 gives an impression of this handout. It is also attached in full size to this deliverable (see Annex).







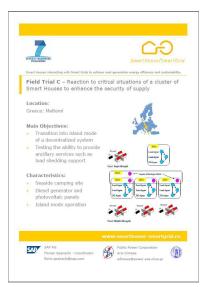


Figure 4: SmartHouse/SmartGrid handout



#### 4. Implementation Strategy and Timeline

The dissemination responsible accounts for the communication on the project and its results, both to the internal audience, the scientific community and the potential business users of the outcomes of the project. Hence all partners of this intended project to be funded by the European Commission are aware of and committed to a proper communication of the project results. It is the principle of all dissemination activities to use research results to create value within the targeted communities of the European Union, and for the partners to promote and ensure a leading edge for themselves within the global market place.

Wherever possible, research results will be communicated for the external awareness creation and knowledge building within the targeted user and scientific communities of the European Union. The communication should guide and prepare potential users for the benefits and potential of the expected outcomes of the SmartHouse/SmartGrid project. In order for the dissemination to be effective, an integrated approach will be necessary, combining templates, guidelines and approval processes on one side with a communication platform, publication, event participation and release plans on the other.

Considering the timetable of the project, first significant results are to be expected after the field tests have started, so from the beginning of 2010 onwards. Thus, the major part of the dissemination events will start to be high in this period, although some publications and project materials such as the website, a handout and a project poster have already been created and presented. Once the empirical results of the project are collected and new insights have been gained, a more detailed message can be addressed to the target groups, enhancing the effectiveness of communication.



#### **Appendix**

#### The First SmartHouse/SmartGrid Newsletter and List of Recipients

#### THE SMARTHOUSE/SMARTGRID NEWSLETTER

# SmartHouse/SmartGrid

#### CONTENT

Latest events
New deliverables
ISET Kassel becomes a new Fraunhofer Institute
Other news and announcements

#### **LATEST EVENTS**

#### Paper presented for IAEE conference

Anke Weidlich presented the project and first results at the 10th IAEE European Conference held on 7-10 September 2009 in Vienna. The paper "Integrating Smart Houses with the Smart Grid Through Web Services for Increasing Energy Efficiency" is available for download.

#### Demo shown at Brussels event

Stamatis Karnouskos presents a SH/SG demo at a Commission workshop in Brussels. The workshop's target was to debate and plan the implementation of demonstrations of smart electricity distribution network solutions to integrate distributed energy resources and demand response.

For upcoming events, see announcements in the last section.

#### **NEW DELIVERABLES**

The project has published four deliverables so far:

- D1.1: High-Level System Requirements
- D1.2: Technology Trends for SmartHouse/SmartGrid
- D2.1: In-House Architecture and Interface Description
- D2.2: Coordination Algorithm and Architecture Document

All public deliverables, along with further articles and presentations prepared within the SH/SG project, can be downloaded at the <u>publication section</u> of the project website.

#### ISET KASSEL BECOMES A NEW FRAUNHOFER INSTITUTE

The former SmartHouse/SmartGrid project partner "Institut für Solare Energieversorgungstechnik" (ISET) has now become part of the new Fraunhofer Institute for Wind Energy and Energy Systems Technology IWES. IWES was founded by the Fraunhofer-Gesellschaft in January 2009, and ISET joined the new institute as of August 17.



SmartHouse/SmartGrid is an EU co-funded research project carried out by the following partners















For the ISET projects and research topics, this offers new attractive perspectives in the future. The Fraunhofer-Gesellschaft is a federal engineering research institution with more than 15,000 employees and 1.4 billion Euro turnover, so it is a strong player in the research domain; besides, it hosts a lot of expertise in the Smart Grid area and thus offers a stimulating environment for the SmartHouse/SmartGrid project.

Further information can be found in the official <u>Fraunhofer press</u> release.

#### OTHER NEWS AND ANNOUNCEMENTS

#### **OGEMA Alliance launched**

The Fraunhofer IWES, who is involved in various research projects in the area of Decentralized Energy Management and Smart Grids, has started the <u>OGEMA Alliance</u> together with ECN to develop an open standard for energy efficient integration of applications in the area energy management and energy efficiency at customer side in the electricity distribution network. David Nestle is the spokesperson of this alliance.

#### SH/SG at the International ETG Convention

David Nestle will the SmartHouse/SmartGrid project and concepts at the International <a href="ETG-Kongress">ETG-Kongress</a> in Germany on October 28, 2009. The paper "Integration of Smart Houses into a Smart Distribution Grid - Business Models and IT-Infrastructure" by David Nestle, Jan Ringelstein and Patrick Selzam (IWES Kassel) will be available for download soon after.

#### SH/SG in Nice

Part of the project team will be present at the <a href="ICT for Sustainable">ICT for Sustainable</a>
<a href="Homes">Homes</a> workshop on November 16 & 17, 2009 in Nice, France. The team members will take the opportunity to exchange ideas and latest research results with similar projects.

You received this e-mail because you expressed interest in the project at <a href="http://www.smarthouse-smartgrid.eu/">http://www.smarthouse-smartgrid.eu/</a>. If you do not wish to receive further mails, please write a short message to <a href="mailto:anke.weidlich@sap.com">anke.weidlich@sap.com</a>.



The following table documents the audience for the newsletter, as of October 15 2009. The list of interested parties that will receive future newsletters is growing steadily, as can be derived from the subscription dates of those already on the list (last column). The email addresses are not listed in this table, in order to preserve privacy.

Nr.	Name	Company	Address	Date
This table is not provided in the public version of the document. It has only been provided to the				

European Commission.





**SmartHouse/SmartGrid** – Next-generation energy efficiency and sustainability

- » Customer-interactive in-house technology for energy management
- » Interaction with Smart Grid
- » Distributed control in decentralized energy world
- » Electronic markets and forecasting techniques





www.smarthouse-smartgrid.eu

















Smart Houses interacting with Smart Grids to achieve next-generation energy efficiency and sustainability.

**Field Trial A** – Mass application for automatic aggregated control of end-user systems for energy efficiency

## Location:

The Netherlands

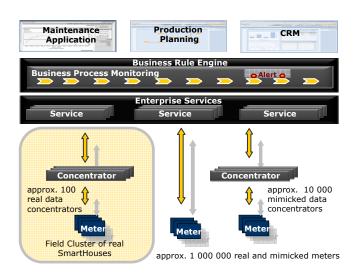
## **Main Objectives:**

- » Validation of multi-agent system based aggregation of Smart Houses for maximizing efficiency
- Testing scalability for mass application

## **Characteristics:**

- » PowerMatcher protocol
- » Integration of μCHP plants





## www.smarthouse-smartgrid.eu



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Smart Houses interacting with Smart Grids to achieve next-generation energy efficiency and sustainability.

# **Field Trial B** – Win-win situations in domestic cluster of ISET BEMI plus in selected grid segments

### Location:

Germany: Mannheim

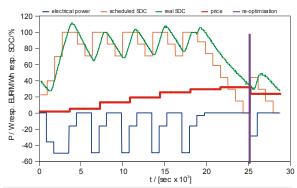
## **Main Objectives:**

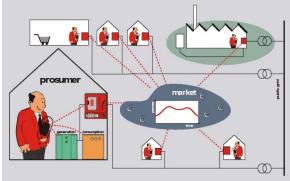
- » Validation of the BEMI developed by ISET
- » Testing the ability to control a network of energy devices in a decentralized manner for achieving higher efficiency

#### **Characteristics:**

- » 100 Smart Houses in an ecological settlement
- » Photovoltaic and μCHP in many houses







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Smart Houses interacting with Smart Grids to achieve next-generation energy efficiency and sustainability.

**Field Trial C** – Reaction to critical situations of a cluster of Smart Houses to enhance the security of supply

## **Location**:

Greece: Meltemi

## **Main Objectives:**

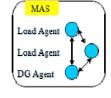
- » Transition into island mode of a decentralized system
- » Testing the ability to provide ancillary services such as load shedding support

## **Characteristics:**

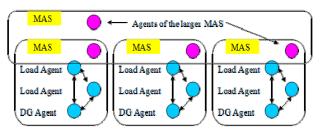
- » Seaside camping site
- » Diesel generator and photovoltaic panels
- » Island mode operation

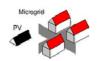






Case 1 Single Microgrid









Case 2 Multiple Microgrids

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